

REMARKS

At the request of Examiner Karl Puttlitz, please enter the amendment of pages 55 and 56. The new pages show the catalyst row with no truncations of the headers. No new matter has been added.

The Examiner is requested to contact the undersigned if any issues arise with this amendment.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By:



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TABLE 18
Yields of the products obtained during the catalyst tests

Catalyst	Calcination temp (°C)	Flow rate of air (ml/min/gca)	Oven temperature (°C)	Hot temperature (°C)	TTG = total TTU	TTG O ₂ = total TTU	C balance	O balance	Acetaldehyde	Propanaldehyde	Acetone	Acrolein	Allyl alcohol	Allyl acrylate	Acetic acid	Propionic acid	Acrylic acid	CO	CO ₂	Propene	Propane	CO+CO ₂	Acid per assay
C33	280	0	400	412	16.5	35.0	98.4	102.1	0.0	0.0	0.1	0.0	0.0	0.0	1.9	0.1	5.3	2.6	1.9	4.6	81.9	4.5	8.3
C34	280	10.6	400	411	15.6	31.6	98.8	103.2	0.0	0.0	0.1	0.0	0.0	0.0	1.5	0.1	5.8	2.0	1.5	4.5	83.2	3.6	8.1
C35	290	0	400	412	16.5	34.5	99.3	103.0	0.0	0.0	0.1	0.0	0.0	0.0	1.7	0.1	5.7	2.4	1.8	4.6	82.7	4.2	8.3
C36	290	10.6	400	411	15.5	30.9	98.2	102.1	0.0	0.0	0.1	0.0	0.0	0.0	1.5	0.1	6.0	2.0	1.4	4.5	82.7	3.4	8.2
C37	300	0	400	410	14.4	28.1	99.6	98.1	0.0	0.0	0.1	0.1	0.0	0.0	1.2	0.1	5.5	1.7	1.3	4.5	85.2	2.9	7.9
C38	300	10	400	411	15.7	32.2	97.3	97.5	0.0	0.0	0.1	0.0	0.0	0.0	1.6	0.1	5.6	2.1	1.5	4.7	81.6	3.6	8.2
C39	300	20.1	400	413	16.7	34.4	98.1	101.6	0.0	0.0	0.1	0.0	0.0	0.0	1.6	0.1	6.7	2.1	1.6	4.5	81.4	3.7	9.2
C40	300	51.6	400	405	17.7	36.5	99.3	99.6	0.0	0.0	0.3	0.0	0.0	0.0	1.9	0.2	7.7	2.1	1.5	4.1	81.5	3.6	10.1
C41	320	0	400	414	23.5	48.7	99.5	103.1	0.0	0.0	0.2	0.0	0.0	0.0	2.1	0.1	12.8	2.4	1.7	4.2	76.0	4.2	15.5
C42	320	0	420	438	29.6	67.3	98.7	101.6	0.0	0.0	0.1	0.0	0.0	0.0	2.6	0.0	15.0	4.3	3.1	4.5	69.0	7.4	18.5
C43	320	10	400	414	21.6	44.2	100.0	102.5	0.0	0.0	0.2	0.0	0.0	0.0	1.8	0.1	11.3	2.3	1.7	4.3	78.4	3.9	13.8
C44	280	21.2	400	413	20.5	45.6	99.5	101.8	0.0	0.0	0.2	0.0	0.0	0.0	2.0	0.1	9.5	2.5	1.9	4.3	79.1	4.4	12.9
C45	290	19.1	400	414	16.9	35.7	96.3	95.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.1	7.2	2.1	1.6	4.2	79.4	3.7	9.7
C46	320	19.2	400	413	18.1	39.4	99.2	95.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	8.8	2.1	1.5	3.9	81.2	3.6	11.2
C47	280	49.2	400	415	18.3	39.8	101.1	99.9	0.0	0.0	0.1	0.0	0.0	0.0	1.6	0.1	8.6	2.2	1.6	4.2	82.8	3.8	11.0
C48	290	52.9	400	414	20.9	46.7	99.1	101.8	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.1	10.1	2.5	1.9	4.2	78.2	4.4	12.9
C49	320	51.6	400	412	16.1	36.2	98.0	99.1	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	6.4	2.3	1.6	3.8	81.9	3.9	9.0

TABLE 19
Selectivities of the products obtained in the catalyst tests

Selectivities (%)																				
Catalyst	Calcination temp (°C)	Flow rate or air (ml/mn/gca)	Oven temperature (°C)	Hot temp. (°C)	TTG = total TTU	TTG O ₂ = total TTU	C balance	O balance	Acetaldehyde	Propanaldehyde	Acetone	Acrolein	Allyl alcohol	Allyl acrylate	Acetic acid	Propionic acid	Acrylic acid	CO	CO ₂	Propene
C33	280	0	400	412	16.5	35.0	98.4	102.1	0.0	0.0	0.7	0.1	0.0	0.0	11.5	0.3	32.2	15.7	11.6	27.8
C34	280	10.6	400	411	15.6	31.6	98.8	103.2	0.1	0.0	0.9	0.1	0.0	0.0	9.7	0.3	37.2	13.1	9.8	28.8
C35	290	0	400	412	16.5	34.5	99.3	103.0	0.1	0.0	0.7	0.1	0.0	0.0	10.5	0.3	34.8	14.6	11.0	27.9
C36	290	10.6	400	411	15.5	30.9	98.2	102.1	0.0	0.0	0.9	0.1	0.0	0.0	9.6	0.3	38.6	12.8	8.9	28.9
C37	300	0	400	410	14.4	28.1	99.6	98.1	0.0	0.0	0.8	0.4	0.0	0.0	8.5	0.7	38.0	11.7	8.7	31.1
C38	300	10	400	411	15.7	32.2	97.3	97.5	0.0	0.0	0.9	0.2	0.0	0.0	10.3	0.4	35.4	13.4	9.8	29.7
C39	300	20.1	400	413	16.7	34.4	98.1	101.6	0.0	0.0	0.9	0.1	0.0	0.0	9.7	0.4	39.9	12.6	9.3	27.0
C40	300	51.6	400	405	17.7	36.5	99.3	99.6	0.0	0.0	1.6	0.0	0.0	0.0	10.7	1.0	43.2	11.6	8.5	23.4
C41	320	0	400	414	23.5	48.7	99.5	103.1	0.0	0.0	0.8	0.1	0.0	0.0	8.8	0.3	54.5	10.4	7.3	17.9
C42	320	0	420	438	29.6	67.3	98.7	101.6	0.0	0.0	0.4	0.1	0.0	0.0	8.7	0.1	50.6	14.5	10.6	15.1
C43	320	10	400	414	21.6	44.2	100.0	102.5	0.0	0.0	0.7	0.1	0.0	0.0	8.5	0.3	52.3	10.5	7.7	20.0
C44	280	21.2	400	413	20.5	45.6	99.5	101.8	0.0	0.0	0.8	0.1	0.0	0.0	9.7	0.3	46.6	12.4	9.2	20.9
C45	290	19.1	400	414	16.9	35.7	96.3	95.8	0.1	0.0	0.2	0.1	0.0	0.0	9.7	0.3	42.8	12.5	9.6	24.7